VERONA ROAD/WEST BELTLINE
SOLUTIONS FOR TOMORROW

WisDOT Project ID 1206-07-03

US 12/14 (Beltline) Crossing Alternative

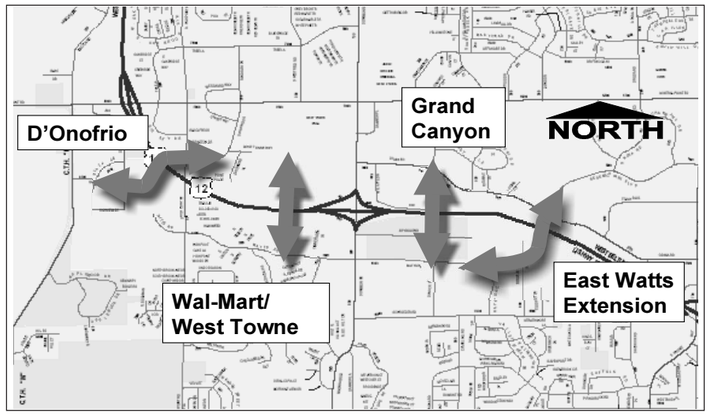
This portion of the Study reduces US 12/14 congestion by relieving traffic volumes and congestion at the US 12/14 interchanges. The study looks at improving the West Beltline interchanges and providing more grade-separated crossings (underpasses and overpasses) across the Beltline so traffic does not have to go through an interchange to travel to the other side of the Beltline.

Most of the interchange improvements focus on conventional interchange expansion (adding turn lanes) and possible conversion to a single-point interchange (a more efficient urban interchange where all turn movements occur around a central point).

Grade-separated crossings are being considered at four locations and are named Alternatives X1 through X4. Not all of the crossings will be constructed, and the crossing alternatives could be installed in any combination. All proposed crossings would include bike lanes and sidewalks. The following bullets describe the crossing locations.

- D'Onofrio Drive Extension (Alternative X1)
- West Towne/Wal-Mart Crossing (Alternative X2)
- Grand Canyon Crossing (Alternative X3)
- East Watts Road Extension (Alternative X4)

Preliminary traffic modeling shows the West Towne/Wal-Mart Crossing and the East Watts Road Extension are the most effective at relieving traffic volumes and congestion from interchanges.



BELTLINE GRADE-SEPARATED CROSSING ALTERNATIVES

PROJECT CONTACTS:

John Steiner, *WisDOT*
(Project Manager)
246-3862 (voice)
246-3819 (fax)
john.steiner@dot.state.wi.us

Tom Lynch, *Strand Associates*
(South Verona Road, West Beltline)
251-4843 (voice)
251-8655 (fax)
tom.lynch@strand.com

Mike Slavney, *Vandewalle & Associates*
Verona Road Interchange
255-3988 (voice)
255-0814 (fax)
mslavney@vandewalle.com

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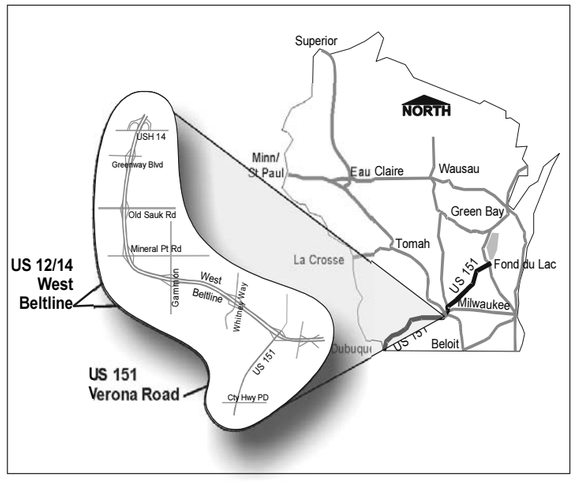
Introduction

To address the long-term needs of the West Beltline and Verona Road, the Wisconsin Department of Transportation (WisDOT) has prepared a Draft Environmental Impact Statement (DEIS). The DEIS is the first step in planning long-term infrastructure investments. In a DEIS, corridor needs are identified, solutions are investigated, and impacts are analyzed. The DEIS study on the Beltline spans from Todd Drive west to US 14 in Middleton. On Verona Road, it spans from the Nakoma Road intersection to County PD. Any improvements evaluated in the DEIS will not occur until *2009 or later*. This handout lays out some of the critical needs of these two corridors and the primary alternatives currently being considered.



STUDY AREA

GROWTH

Madison area growth has increased Beltline traffic volumes from 27,000 vehicles per day in 1967 to 120,000 vehicles per day in 2000. During that period, the Madison area has enjoyed an efficient transportation corridor that moves people, goods, and services without serious delays. However, most of the Beltline reaches its capacity during the morning and evening rush hours, and traffic volumes are projected to grow up to 136,000 vehicles per day by 2020. This will cause increased congestion and an extension of the morning and evening rush hours.

State System

US 151 (Verona Road) is classified as a backbone route in the state transportation plan, Corridors 2020. Other backbone routes include Interstate 90/94 and Interstate 39. Corridors 2020 routes, while comprising only 3 percent of Wisconsin's roadways, carry 34 percent of all auto travel and 57 percent of all truck travel. Most backbone routes will be freeways/ expressways by the year 2009. Backbone routes are connected with system interchanges that have free-flow ramps without traffic signals to handle the large traffic volumes. The Beltline/ Verona Road interchange is a system interchange that handles the same amount of traffic as the I 90/94 interchange and the Beltline/I 90 interchange. Yet this interchange still has the conventional diamond ramps with traffic signals. The Beltline/ Verona Road interchange occupies just 20 percent of the area that the other area system interchanges do yet must carry the same or more volume than the other interchanges.

US 151 Backbone Alternatives

Urban Roadway Alternatives

The Urban Roadway alternative reconstructs Verona Road to an urban roadway similar to what exists today, with traffic signals at the five intersections in the study corridor. Verona Road would be expanded to three lanes all the way to County PD and existing intersections would be expanded with more turn lanes. The existing Verona Road interchange would be reconstructed into a configuration that is similar to what exists today, except that there would only be one set of traffic signals at the interchange instead of two sets. On the south portion of the corridor, the east and west frontage roads would be connected directly to County PD to provide an alternate route for local traffic. The Urban Roadway alternative is considered a "Low Build" alternative. Improvements focus on increasing the efficiency of the existing intersections, traffic signals, and frontage road system. Since traffic-carrying capabilities are only marginally increased, this concept relies on other area roadways to carry regional and metropolitan traffic.

US 151 Backbone Alternatives

Urban Roadway Alternative

(Continued)

Traffic Operations

The Urban Roadway alternative is able to handle 8 to 15 percent more traffic than what the roadway is currently experiencing. As Verona Road becomes congested, traffic diverts to other corridors such as Seminole Highway, Fish Hatchery Road, and County PD. Traffic on Verona Road will continue to experience a moderate amount of congestion during the evening rush hour, with average vehicle delays at intersections ranging from 25 to 60 seconds. The Summit (Home Depot) intersection continues to be the greatest source of vehicle delay. Travel time from Seminole Highway to County PD for through US 151 traffic will average about 7 minutes in the year 2020 during the evening rush hour.

Bicycle and pedestrian accommodations through the corridor would remain similar to what exists today. The interchange area, however, will become more difficult to travel through.

Impacts and Cost

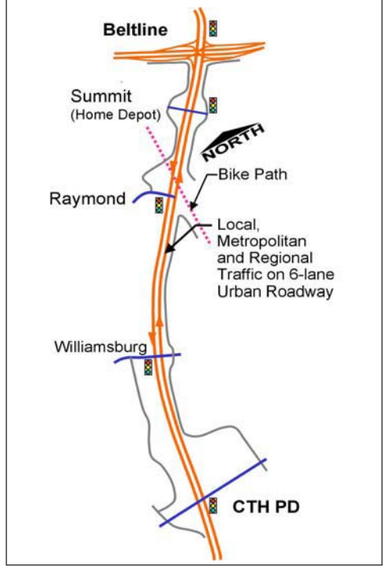
The Urban Roadway Alternative has the fewest physical impacts of any of the alternatives being considered. The following bullets summarize some of the impact characteristics of this alternative.

- Right-of-way needed . . . . . 10.6 acres
- Business relocations . . . . . ~6
- Household relocations 21
- Cost . . . . . $60–65 million

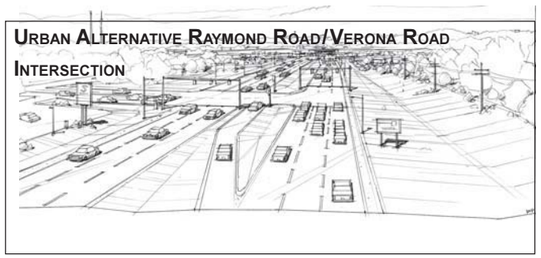
Traffic noise levels along the corridor would remain comparable to what exists today.

Urban Alternative Verona Road/Beltline Interchange

Urban Alternative Schematic



Urban Alternative Raymond Road/Verona Road Intersection



Freeway Alternative

The Freeway Alternative takes the US 151 regional traffic and places it on a depressed freeway that is constructed in the median of Verona Road. Verona Road would remain as an urban arterial that is parallel to the US 151 freeway with traffic signals at each of the intersections. The US 151 freeway would travel underneath the signalized intersections.

The diamond interchange at the Verona Road exit would remain, yet the regional US 151 traffic would be pulled out of the interchange with higher speed free-flow ramps that travel underneath the interchange. Ramps from the Verona Road urban arterial onto US 151 would be placed at different locations through the corridor. To help Beltline operation, the east ramps of the Seminole Highway interchange would be removed. Seminole Highway access across the Beltline would remain, yet access to the Beltline would be removed. One option that exists with this alternative is extending Raymond Road across US 151 and connecting it to Allied Drive, providing another entrance into the Allied/Dunns Marsh neighborhood.

Freeway Alternative Verona Road/Beltline Interchange

Traffic Operations

The Freeway Alternative is able to carry up to 140 percent more traffic than what is currently experienced. Because of this, traffic volumes on adjacent corridors, such as Seminole Highway, actually decrease as traffic is redirected to Verona Road. The US 151 freeway captures 40 percent or more of Verona Road traffic while the Verona Road arterial carries the remaining local traffic. With the regional traffic on the US 151 freeway, the signalized intersections on Verona Road operate much better with average delays ranging from 7 to 15 seconds per vehicle during the 2020 evening rush hour. Travel time from Seminole Highway to County PD for through US 151 traffic will average about 2 minutes in the year 2020 evening rush hour.

Bicycle and pedestrian movement will be improved as a result of depressing the high-speed traffic and providing wider, better crossings at intersections.

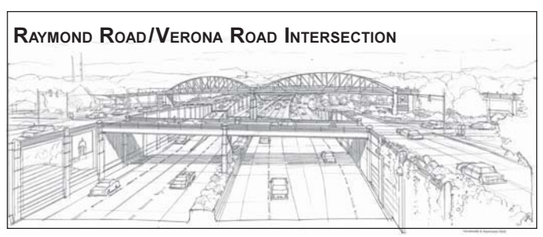
Impacts and Cost

While the Freeway Alternative has substantially better traffic operation, this alternative also has larger impacts. The following bullets summarize some of these impacts.

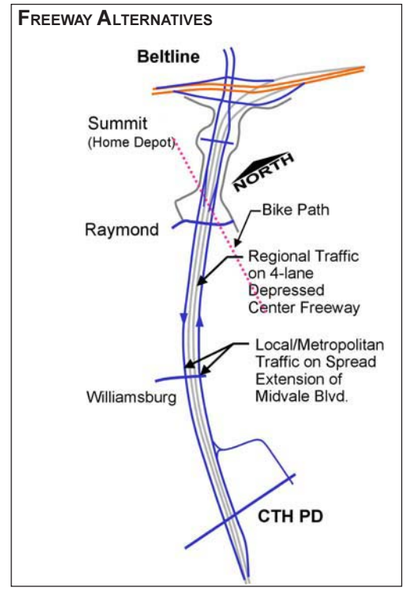
- Right-of-way needed . . . . . ~22 acres
- Business relocations . . . . . ~33
- Household relocations 36–44
- Cost . . . . . $135–140 million

Because the US 151 freeway is being depressed, the retaining walls will help contain some of the noise caused by trucks. With this alternative, 2020 traffic noise levels along the corridor would be reduced by a few decibels from what currently exists.

Raymond Road/Verona Road Intersection



Freeway Alternatives



US 12/14 (Beltline) Corridor Alternatives

Three alternatives are being considered for the West Beltline: No Build, Alternative A, and Alternative B. The No Build Alternative does not expand the Beltline but does provide maintenance and spot improvements.

Alternative A provides Auxiliary Lanes and Ramp Meters at select locations on the Beltline. Auxiliary lanes start at the on-ramp of one interchange and end at the exit to the next interchange. They provide an area for weaving vehicles and also provide more acceleration room for vehicles being released from a ramp meter.

Alternative B provides the auxiliary lanes and ramp meters incorporated in Alternative A but also adds a third lane in each direction from Mineral Point Road to Verona Road.